

CTGGCTCCAAGTTGTCCAGCCCCACCGCCTGGGGTGTCCAGCCGGCTCCCGGACGCCCTCTGGGGCGGGCGGGCTGGGG 90
GGGGGGGGTCAAGCAGAAAACAGGAAGAACCCACGGCTGGTCACTGGCACCCAGCTCCCTACCTCTGTCCCAGCCGCTGGCTGTGGCA 180
GGCCATTCCAGCGTCCCCACTGTGACCACTTGCTCACTGTCCCTCACCTGCCTAGTTCCCTCTGGGGGGATGGGGGGAG 270
M A G R

Sma I

GCTCTCTGGTTCTGGGGGCATTCACGGCTGTGATTCTGCTGAGGAACCTCCCCGGTGAGCCCCCGCTCCCTCCAGGCCTGGCAC 360
G S L V S W R A F H G C O S A E E L P R V S P R F L R A V H

Sma I

CCCCCTCCGCTCAGCCAGGATGCCAACGAGGGCTGGGGGGGGACCCAGTGTATCACAAATGCCAACACCCCCAAGCCAG 450
P P P V S A R M P T R R W A P G T O C I T K C E H T R P K P

Stu I

Kpn I

GGGAGCTGGCTTCCGCAACGGGACGTGGTACCATCCTGGAGGGCTCCGAGAAACAAGAGCTGGTACCCGCTAAGCACACACCAGTG 540
G E L A F R K G D V Y T I L E A C E N K S W Y R V K H H T S SH3
G E L A F R K G D V Y T I L E A C E N K S W Y R V K H H T S

Pvu II

CACAGGGGGCTGCTGGCAGCTGGGGGGCTGGGGAGGGCCCTCTCCGAGACCCAAAGCTCACCTCATGCCGTGGTCCACG 630
G O E G L L A A G A L R E R E A L S A D P K L S L M P W F H

Pvu II Pst I

CGAAGATCTGGGGCAGGAGGCTGTCCAGCAGCTGCAGCCTCCGAGGATQQGCTTCTGGTCCGGAGCTCCGGGCCACCCGGCG 720
G K I S G Q E A V Q Q L Q P P E D G L F L V R E S A R H P C SH2

Cla I

ACTACCTCTGTGCCGTGACCTTGGCCGACGTATCCACTACCGCTGCTGCACCCGACGCCACCTCACAAATCGATGAGGCCGTGT 810
D Y Y L C V S F G R D V I H Y R V L H R O G H L T I D E A V

TCTCTGCAACCTCATGGACATGGAGATTACAGCAAGGACAAGGGCGCTATCTGACCAAGCTGGTAGACCAAAACGGAAACACG 900
F F C N L M O H Y E H T I S K D K G A I C T K L V R F K R K H

Pst I

CGACCAAAGTGGCCAGGAGGCTGGCAAGGGGGCTGGTTACTGAACCTGCAGCATTTGACATTGGGACACAGATGGAGAGGGAG 990
G T K S A E E E L A R A G W L L N L O H L T L G A Q I G E G

Pst I

Stu I

AGTTGGAGCTGTCTGCAGGGTCACTGGGGCAAAAGGTGGCCGTGAAGAATATCAAGTGTGATGTGACAGCCCAGGCCTCTGG 1080
E F G A V L O G E Y L G Q K V A V K N I K C D V T A Q A F L TK

ACGAGACGCCGTCATCACGAAGATCCAACACGGAGAACCTGGTGCCTCCGGCGTATCTGCACCAAGGGCGCTACATTGTCACTGG 1170
D E T A V M T K M O H E N L V R L L G V I L H Q G L Y I V M

Sma I

Pst I

AGCACGTGAGCAAGGGCAACCTGGTGAACCTTGCTGGGACCCGGGTGAGCCCTCGTAACACCGCTCACCTCTGCAGTTTCTCTGC 1260
E H V S K G N L V N F L R T R G R A L V N T A Q L L O F S L

FIGURE 1A

HinD III

ACCTGGCCGACGGCATEGGAGTACCTGGAGAGCAAGAAGCTTGTGCACCGGACCTGGCCCCCCCACATCCTGCTCTAGACGGACCTGG 1350
H V A E G M E Y L E S K L V H R D L A A R N I L V S E D L

TGCCCAAGGTAGGGACTTTGCCCTGCCAAAGCCGAGCGGAAGGGGCTAGACTCAAGCCGGCTGCCCTCAAGTGGACGGCCCCGAGG 1440
V A K V S D F G L A K A E R K G T D S S R L P V K W T A P E

Nde I

CTCTCAAACACGGGAAGTCACCAAGCAAGTCGGATCTCTGGAGTTTGGGCTCTGCTCTGGGACCTCTCATATGGACGGCTCCGT 1630
A L K H G K F T S K S D V V S F G V L L V E V F S Y C R A P

Kpn I

ACCTCTAAATGTCACTGAAAGACGGTCTGGAGCCGTCGAGACAAGGGCTACCCATGGAAACCCCCCGAGGGCTGTCCAGGGCCCCGTCCACG 1620
Y P K M S L K E V S E A V E K C Y R M E P P E G C P G P V H

Pvu II

TGCTCATGACCAGCTGCTGGAGGAGACCCGCCCGCCACCCCTCCGCAAACCTGGCCGAGAACCTGGCCGGAGCTACCCAGTG 1710
Y L M S S C W E A E P A R R P P F R K L A E K L A R E L R S.

CACGTGCCCCAGCCTCCGTCTCAGGGCAGGACGCCACGGCTCCACCTCCCCCGAAGCCAGGACCCCTGACCCCATCCGCTGGCCCT 1800
A G A P A S Y S G Q D A D G S T S P R S Q E P .

TGGCCCCAGAGGACCGAGAGACTGGAGACTGGGGCTGGGGGACTGACCAAGGCCAAGGAAGGTCCAGGGCCAAAGTCATCCTGG 1890

TCCCCACAGCAGGGCTGGCCACGTAGGGGCTCTGGCGGCCCTGGACACCCACACCTGGAAAGGATGATGGCCCGATAAACACGG 1980

ATTCTAAGGACTCTAAAAAA 2000

Sma I

FIGURE 1B

CCGCTTTGCTTAGAGCTTGAGACTAAAGACCCACATGTATACTTCGGCTAGCGACT ATGATAATATGGATACA 90
 K S I L E E L L L K R S O Q K K K M S P N N Y K E R L F V L M D T

AAATCTATTCTAGAAGAACCTTCTCAAAAGATCACAGCAAAGAAAATGTCACCAAATAATTACAAAGAACGGCTTTGTTTG 180
 T K T N L S Y Y E Y D K M K R G S R K G S I E I K K I R C V

ACCAAAACAAACCTTCCTACTATGAATATGACAAAATGAAAAGGGCAGCAGAAAAGGATCCATTGAAATTAGAAAATCAGATGTGTG 270
 E K V N L E E O T P V E R Q Y P F Q I V Y K D G L L Y V Y A P H

GAGAAAAGTAAATCTCGAGGAGCAGACGCCCTGTAGAGAGACAGTACCCATTCACTAGATTGTCTATAAGATGGCTCTCTATGTCTATGCA 360
 T C A A T G A A G A G G C G A A G T C A G T G G T G A A A G C A T T A C A A A A G A G A T A A G G G T A A C C C C A C C T G C T G G T C A A G T A C C A T A G T G G G 450

S N E E S R S O W L K A L O K E I R G N P H L L V K Y H S G

TTCTTCGTGGACGGGAAGTTCCCTGTGTTGCCAGCAGAGCTGTAAGCAGCCCCAGGATGTACCCCTGGGAAGCATATGCTAATCTGCAT 540
 F F V D G K F L C C O O S C K A A P G C T L W E A Y A N L H

ACTGCAGTCATGAAGAGAAAACACAGAGTCCCACCTCCCAGACAGACTGCTGAAGATAACCTCGGGCAGTTCTGTTCTAAAATGGAT 630
 T A V N E E K H R V P T F P D R V L K I P R A V P V L K M D

GCACCATCTTCAGTACCACTCTAGCCAATATGACAACGAATCAAAGAAAACTATGGCTCCCAGCCACCATCTTCAGTACCACTGCTA 720
 A P S S S T T L A Q Y D N E S K K N Y G S O P P S S S T S L SH3

CGCAATATGACAGCAACTCAAAGAAAATCTATGGCTCCCAGCCAAACTCAACATGCAGTATATTCAAGGAAAGACTTCCCTGACTGG 810
 A Q Y D S N S K K I Y G S Q P N F N M O Y I P R E D F P D W

TGGCAAGTAAGAAAATGAAAGCAGCAGCTGAAGATGTTGCAAGCAGTAACCAAAAGAAAAGAAATGTGAATCACACCCTCA 900
 W Q V R K L K S S S S S E D V A S S N O K E R N V N H T T S

AAGATTTCATGGATTCCCTGAGTCAGTTCATCTGAAGAAGAGGAAAACCTGGATGATTATGACTGGTTGCTGGTAACATCTCCAGA 990
 K D I S W E F P E S S S S E E E E N L D D Y D W F A G N I S R

TCACAATCTGAACAGTTACTCAGACAAAAGGGAAAAGAGGAGCATTATGGTAGAAATTGAGCCAAGTGGGAATGTACACAGTGTCC 1080 SH2
 S Q S E Q L L R Q K G K E G A F M V R N S S Q V G M Y T V S

TTATTTAGTAAGGCTGTGAATGATAAAAAGCAACTGTCAAACATTACACCGTCATACAAATGCTGAGAACAAATTATACCTGGCAGAA 1170
 L F S K A V N D K K G T V K H Y H V H T N A E N K L Y L A E

AACTACTGTTTATTCCATTCAAAGCTTATTCTATTATCAACACAAATTCAACACCATGATCACACGGCTCCGCCACCCGTGTCA 1260
 N Y C F D S I P K L I H Y H Q H N S A G M I T R L R H P V S

ACAAAAGGCCAACAGGTCCCCACTGTGTCCTGGAAATGGAATCTGGAACTGAAAAGAGAACATTCTGGTGAAGGAGCT 1350
 T K A N K V P D S V S L G N G I W E L K R E E I T L L K E L

-CGAAGTGGCCAGTTGGAGTGGTCCAGCTGGCAAGTGGAAAGGGCAGTATGATGTTGCTGTTAAGATGATCAAGGAGGGCTCCATGTCA 1440
 G S G Q F G V Y Q L G K W K G Q Y D V A V K M I K E G S M S

GAAGATGAATTCTTCAGGAGCCAGACTATGATGAAACTCAGCCATCCCAAGCTGGTTAAATTCTATGGAGTGTGTCAAAGGAATAC 1530
 E D E F F O E A Q T M M K L S H P K L V K F Y G V C S K E Y TX

CCCATATACATAGTGAATATATAAGCAATGGCTGTTGCTGAATTACCTGAGGAGTCACGGAAAAGGACTTGAACCTTCCAGCTC 1620
 P I Y I V T E Y I S N G C L L N Y L R S H G K G L E P S Q L

TTAGAAATGTGCTACGATGTGTGAAGGCATGGCTTCTGGAGAGTCACCAATTACACCGGGACTTGGCTGCTGTAATGCTTG 1710
 L E M C Y D V C E G M A F L E S H O F I H R D L A A R N C L

GTGGACAGAGATCTGTGTGAAAGTATCTGACTTGGAAATGACAAGGTATGTTCTGATGACCAAGTATGTCAGTTCAAGTCAGTCGGAAACAAAG 1800
 V D R D L C V K V S D F G M T R Y V L D D O Y V S S V G T K

FIGURE 2A

TTTCCAGTCAGTGGTCACCTCCAGAGGTGTTCAATTACTCAAATACAGCAGCAAGTCAGACGTATGCCATTGGATCCTGATGTGG 1890
F P V K W S A P E V F H Y F K Y S S K S D V W A F G I L M W
GAGGTGTTAGCCTGGGAAGCAGCCCTATGACTTGATGACAACCTCCAGGTGGTCTGAAGGTCTCCAGGGCACAGGCTTACCGG 1980
E V F S L G K O P Y D L Y D N S O V V L K V S O G H R L Y R
CCCCACCTGGCATCGGACACCATCTACCAAGATCATGTACAGCTGCTGGCACGAGCTTCCAGAAAAGCGTCCCACATTCAGCAACTCCTG 2070
P H L A S D T I Y Q I M Y S C W H E L P E K R P T F O O L L
TCTTCCATTGAACCACTCGGAAAAAGACAAGCATTGAAGAAGAAATTAGGAGTGCTGATAAGAATGAATAGATGCTGCCAGCATT 2160
S S I E P L R E K D K H .
TTCATTCAATTAAAGGAAAGTAGCAAGGCATAATGTAATTAGCTAGTTTAATAGTGTCTCTGTATTGTCTATTAGAAATGAA 2250
CAAGGCAGGAAACAAAGATTCCCTGAAATTAGTCAAATTAGTAATTGTCTGCTGCCCTGATATAACACTTCCAGCCTATA 2340
GCAGAACACATTCAGACTGCAATATAGAGACTGTGTTCATGTGAAAGACTGAGCAGAACTGAAAAATTACTTATTGGATATTCA 2430
CTTTCTTATATTGTCATTGTCACAACAATTAAATACTACCAAGTACAAAAAAAAAAAAAAA 2500

FIGURE 2B

CCGGACTGGTCGAAGACAGGAACAGACTTCAAACAGGGGACAGCTCTGGCAGAACGAGCTGGAGGTTTACCAAGGATAAGAAC 90
 AAAAGACACCTCCTACTGAGCAGCTGCCAGCTCCCTGCTCAGTTTGCTCGGGTAGCACCTCAGCCACAGAAAGCAACCCGGTAAG 180
 TCTCTCCAGCTAGGACTTGCTGCAACCCAGCTGGACTCATCTGAAACGGACTTGCATACTCTCGAAGTATGGTAGTTGGCT 270
 M V S W C
 GACTTCAAAGTTGCCTGGTAAGGAAGATAAGGTGGATCGCAGAGACTAAGEGGAGAGGGAGAAGCCCTGCTCCTCTCCCCACCAAG 360
 GCACAACTGAGCAACATCTGTCAGAGGCTGGAGACTAGAACCTATCTCCCTGTTGTCACGGAGGGAGAACAGTCAACCGCTGA 450
 M S N I C O R L W E Y L E P Y L P C L S T E A D K 8 T V
 TTGAAAATCCAGGGGCTTCTCCCAGTCACAGAGGCATGCCACTACTTGTGGCTTGTGATTACCGCTGGACTGCTG 540
 I E N P G A L C S P Q S O R H G H Y F V A L F D Y O A R T A SH3
 AGGACTTGAGCTCCAGCAGGTGACAACCTCAAGTCTGGACACTTGCATGAGGGCTGGCTTGCAGACACTTGGAGAAAAGAC 630
 E D L S F R A G D K L Q V L D T L H E G W W F A R H L E K R
 CAGATGGCTCCAGTCAGCAACTACAAGGCTATTCCTTAACACTACGTGGCTGAGGACAGAACGCTACAGGCAGAGCCGTGGTTCTG 720
 R D G S S Q O L O G Y I P S N Y V A E D R S L Q A E P W F F SH2
 CACCAATCGGAAGATCAGATGCAGAGAAACAATTATTCAGAAAACAAGACCCGTTCTTAATCAGAGAAAGTGAACCCAAA 810
 S G A I G R S D A E K O L L Y S E N K T G S F L I R E S E S Q
 AAGGAGAATTCTCTTCAAGTTAGATGGACAGTTGAAAAACACTACAGAATTAAAGACTGGATGAAGGGGATTTTCTCACCC 900
 K G E F S L S V L D G A V V K H Y R I K R L D E G G F F L T
 GAAGAAGAATCTTCAACACTGAACGAATTGTGAGCCACTACACCAAGACAACGTGACGGCTGTGTCAAGCTGGAAACCATGCT 990
 R R R I F S T L N E F V S H Y T K T S D G L C V K L G K P C
 TAAAGATCCAGGTCCACCTCCATTGATTGTGTATAAAACCGTGGACCAATGGGACATAGACCGCAACTCCATACACCTCTGAAGC 1080
 S I L K I O V P A P F D L S Y K T V D Q W E I D R N S I O L L K
 GATTGGCATCTGGTCAGTTGGCAACTATGGGAAGGTCTGTGGAAACAATACCACTCCAGTAGCAGTGAACACATTAAACAGGTTCAA 1170
 R L G S G O F G E V W E G L V N N T T P Y A V K T L K P G S
 TGGATCCAATGACTTCTGAGGGAGGCACAGATAATGAAGAACCTAACAGATCCAAAGCTTATCCAGCTTATGCTGGACTTAG 1260
 M D P N D F L R E A O I M K N L R H P K L I Q L Y A V C T L
 AAAGATCCAATTATATTACAGAGTTGAGACATGGAAACTCTGCAACAATATCTCAAATGACACTGGATCAAAACATCTGA 1350
 E D P I Y I I T E L M R H G S L Q E Y L O N D T G S K I H L TK
 CTCACAGGTAGACATGGCGCACAGGTTGCCCTGGAAATGCCATCTGGAGCTCGGAACATACATTACAGAGATCTGGCTCCAGAA 1440
 T Q O V D M A A Q V A S G M A Y L E S R N Y I H R D L A A R
 ATGTCCCTGGTGAACATAATCTACAAAGTAGCAGATTGGACTTGCACAGTTTAAGGTAGATAATGAAGACATCTATGAAT 1530
 N Y L V G E H N I Y K V A D F G L A R V F K V D N E D I Y E
 CTAGACACAAATAAACGCTGCCGTGAAGTGGACTGCCCGAAGCCATTCTGAGTAAATTTACAGCATTAAGTCCGATGTATGGCAT 1620
 S R H E I K L P Y K W T A P E A I R S N K F S I K S D V V S
 TTGGAATCCTTCTTATGAAATCATTACTTATGCCAAATGCCCTACAGTGGATGACAGGTGCCAGGTAACTCCAGATGTTGGCTCAA 1710
 F G I L L Y E I I T Y G K M P Y S G M T G A Q V I O H L A O
 ACTATAGACTTCCGCAACCATCAAACGTCCACACCAATTACAACATCATGGTAGTGGAGTGTGGAAATGAGGCTAAAGAACGACCA 1800
 N Y R L P Q P S N C P Q Q F Y N I M L E C W N A E P K E R P

FIGURE 3A

CATTTGAGACACTGCCTGGAAACTTGAAGACTATTTCAAACAGACTCTTCATATTCAAGATGCAAATAACTTCATAAGATGAACACTCG 1890
T F E T L R W K L E D Y F E T D S S Y S D A N N F I R .
AGAAGAATATCAAATAATAAAAGTAGCAAAACAAATTCAAATAATCCATTCCAAAATACAATGTTATCAACCAACTGCACAATCAGTTAT 1880
CCTGACATATTCAAGTGTAGGATAAAAGTGCCATGTATTATGAAAAAGATTATTTGTGCATTTATTCACTGGCAACACTGCAGGAC 2070
AGTCAAGGTCATATATAATTGCTCACTGCCTGGAAAATTAAGCACACTAAACCAAGTTATTTCTTTAAGAGATACTTACATTC 2160
TTTATTGTTGAAATGTCGGATCAAGAGAATCAACAGATGATAGTCCAATTTTACTCACTGATGACTGTGTAGCATTTECTGTTAC 2250
TGATTAGACTGGTTATTCAATTCTCAGATTGCTGAATCCCCTCAGGCTGTTATTATGAGGAATTGATTGCTTGTGACACAGGAG 2340
GACCTGTGCTTGAGATTTTTCTCTTTAAATATCCTGTAACATACAATGATGGTAAAGCCATGTTAAATGACTTCATTGACTTG 2430
GACTAATTGCACTTTCTATGCATAAAAAAATGATGCAGCTGTTGAGAAAACGAAGTCTTTCTATTGAGGAATGAGGAAATGATGG 2520
AATTTTCTGTACTTCAGTATGTGTCACTCAGAGTCATATACATTAGTTAATCTTTAATATTGAGAATCAGGTTGCAAACGGATG 2610
AGTTATTATCTATGAAATGTGAGAAATGTCTAATAGCCCATAAAAGTCTGAGAAATAGCTACAAATAGTTAGGAAATGAGGAGA 2700
ACAGTAGGATTGCTGGCCTAGACTCTGAGTAATTAAAGAAAAAGAAGTACCAAAAAAAAAAAA 2770

FIGURE 3B

Expression of MKK1 and MKK2

		<u>MKK1</u>	<u>MKK2</u>
	Human		
Meg/Eryth	Meg-01	+++	+++
	K562	++	+
	Mo7e	++	+
	HEL	+++	++
Myelo/Mac	KG-1	+	++
	HL-60	+	+
	TF-1	+	+
B-cell	ALL-1	-	+
	Raji	-	-
	Daudi	-	-
T-cell	Molt-3	-	-
	Jurkat	-	-
Epithelial	HeLa	-	-
	Rodent		
	BM	+	+++
	Spleen	+++	+
	Thymus	-	-
	Liver	-	-
	Brain	+	-
rat neural	P19	+	-

FIGURE 4

**Immunoprecipitation Of In Vitro Transcribed
Translated MKK1 And MKK2 Proteins**

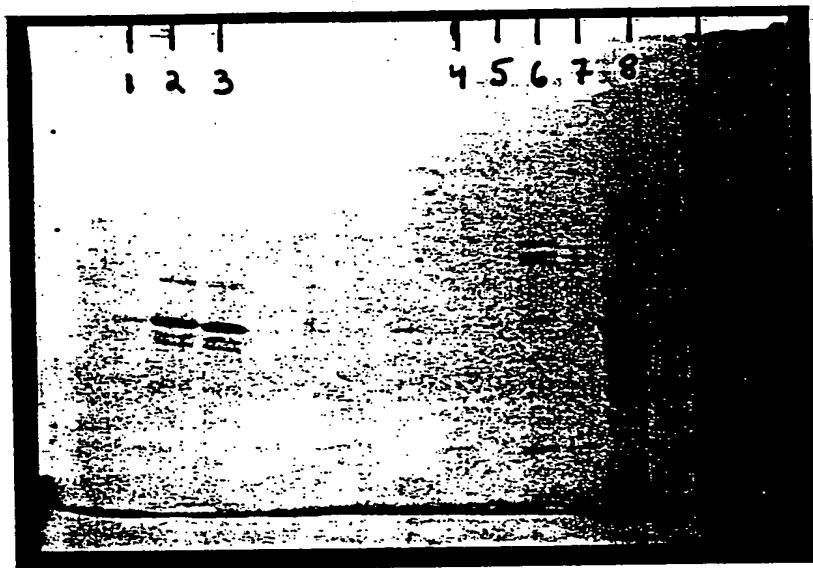


FIGURE 5

Antisense MKK1 Expression Suppresses AChE Production In Primary Murine Bone Marrow Cultures

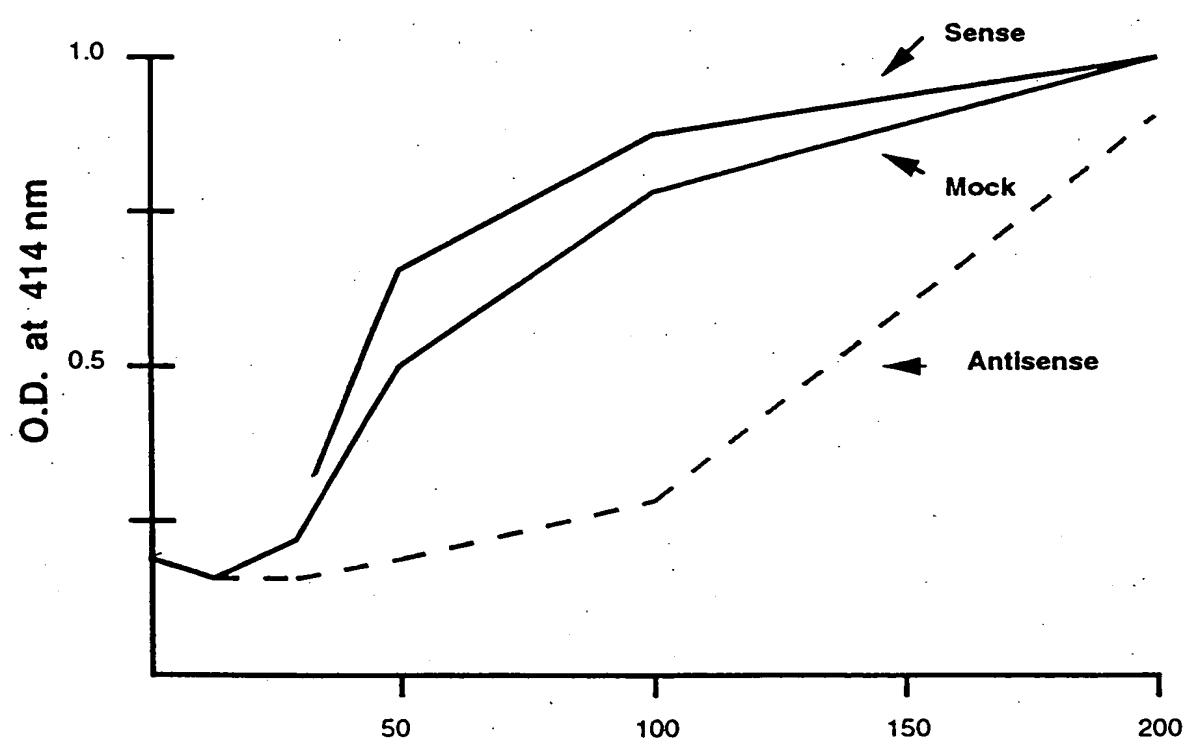


FIGURE 6A

Cell Number x 10³/200 ul

M13K11 Protein Expression

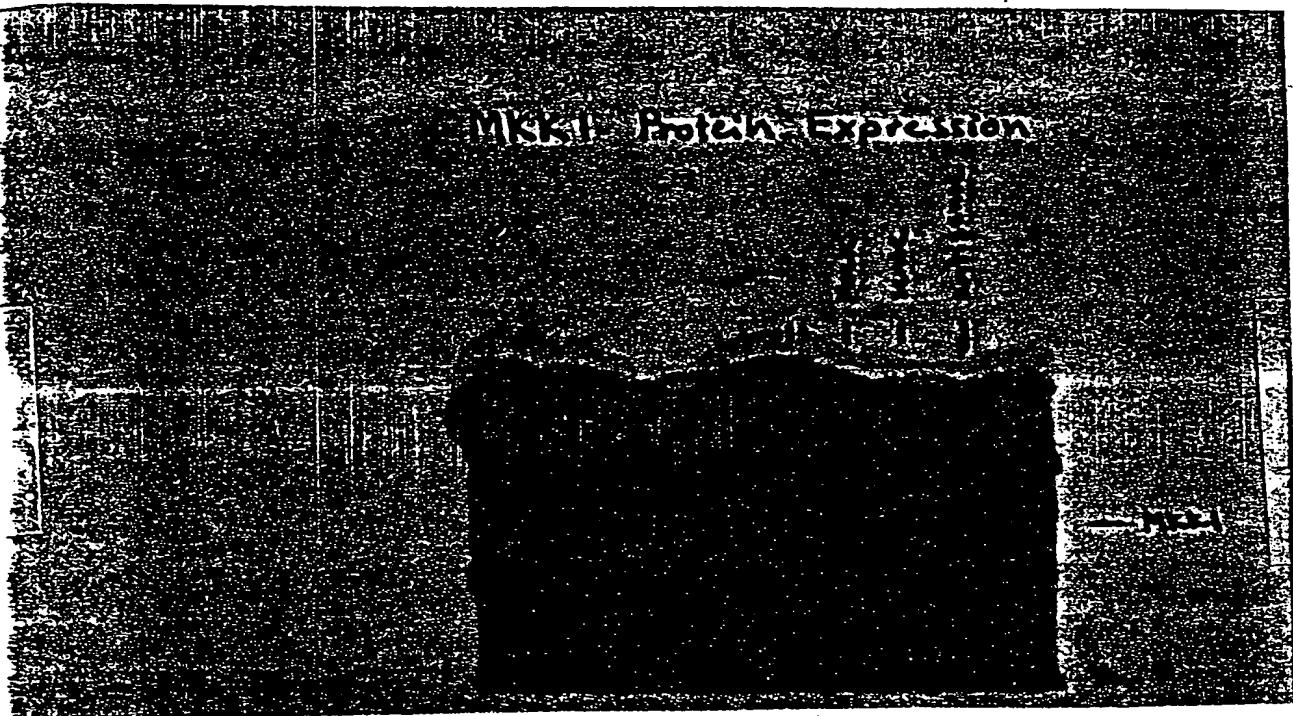


FIGURE 6B

MKK2 AND MKK3 AUTOPHOSPHORYLATE
TRANSPHOSPHORYLATE PROTEINS WHEN EXPRESSED IN BACTERIA

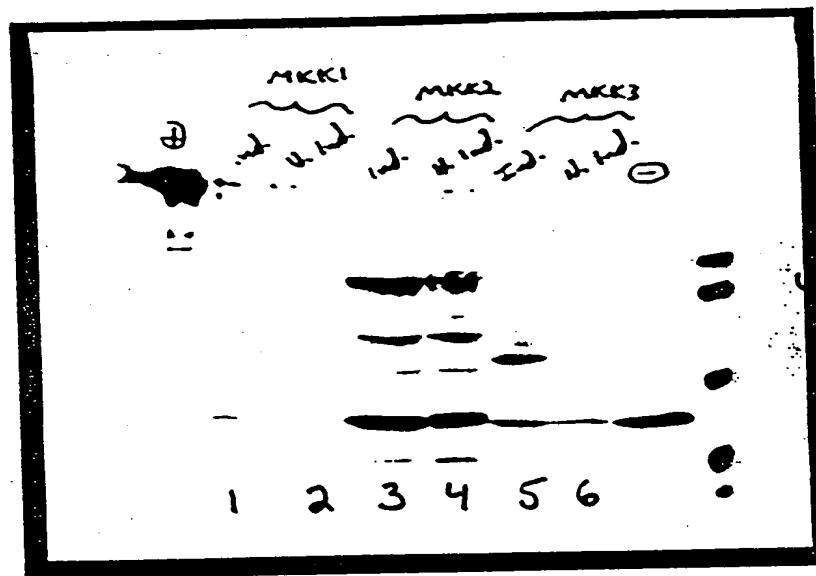


FIGURE 7

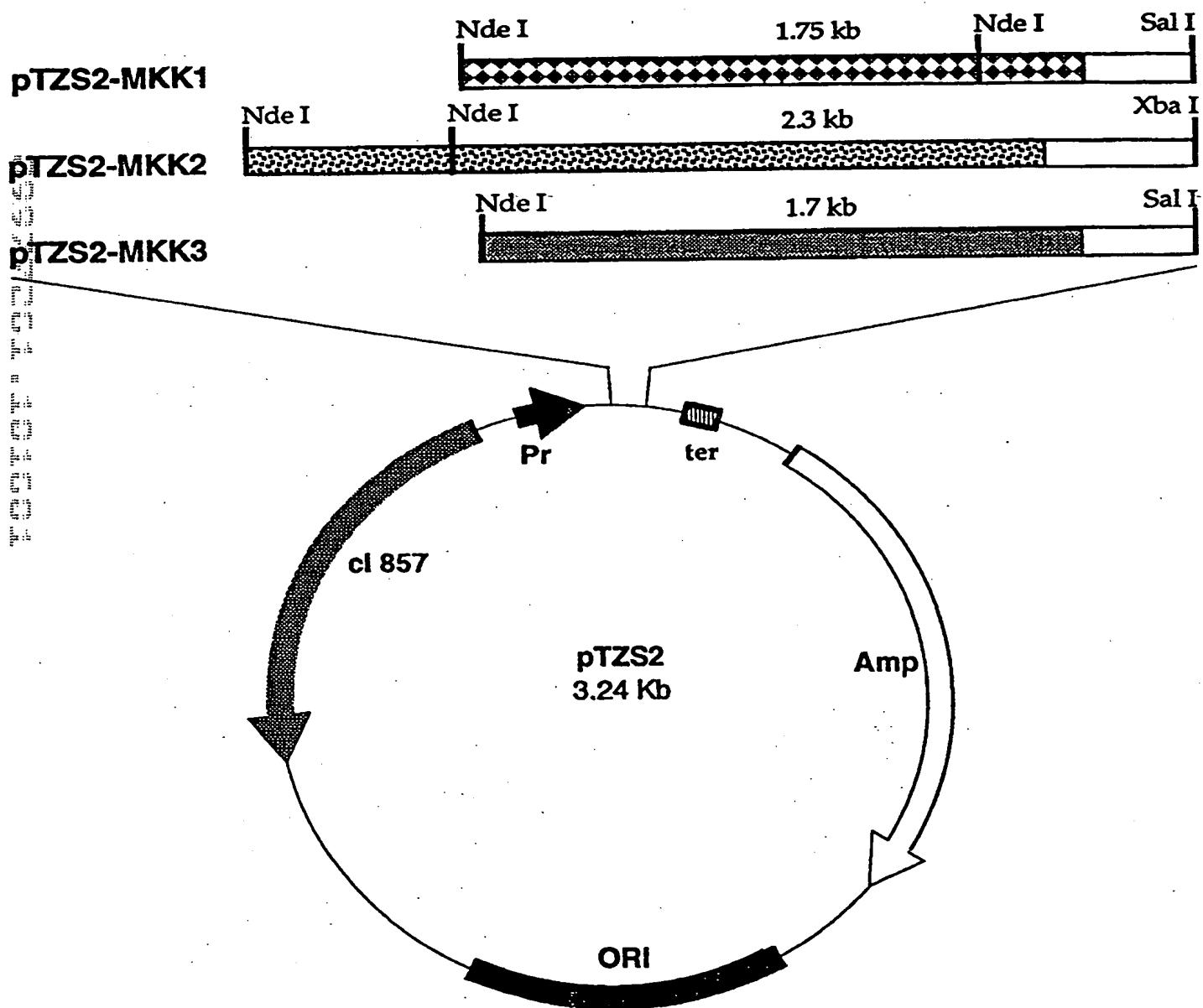


FIGURE 8

1	M A G R G S L V S W R A F H G C D S A E E L P R V S P R F L	MKK1 aa
1	M S A I Q A A - - - - -	hCSK (JH0559)
31	R A W H P P P V S A R M P T R R W A P G T O C I T K C E H T	MKK1 aa
8	- - - - - W P S G T E C I A K Y N F H	hCSK (JH0559)
61	R P K P G E L A F R K G D V V T I L E A C E N K S W Y R V K	MKK1 aa
22	G T A E Q D L P F C K G D V L T I V A V T K D P N W Y K A K	hCSK (JH0559)
91	H H T S G O E G L L A A G A L R E R E A L S A D P K L S L M	MKK1 aa
52	N K V - G R E G I I P A N Y V Q K R E G V K A G T K L S L M	hCSK (JH0559)
121	P W F H G K I S G O E A V O O L O P P E D G L F L V R E S A	MKK1 aa
81	P W F H G K I T R E Q A E R L L Y P P E T G L F L V R E S T	hCSK (JH0559)
151	R H P G D Y V L C V S F G R D V I H Y R V L H R D G H L T I	MKK1 aa
111	N Y P G D Y T L C V S C D G K V E H Y R I M Y H A S K L S I	hCSK (JH0559)
181	D E A V F F C N L M D M V E H Y S K D K G A I C T K L V R P	MKK1 aa
141	D E E V Y F E N L M Q L V E H Y T S D A D G L C T R L I K P	hCSK (JH0559)
211	K R K H G T K S A E E E L A R A G W L L N L Q H L T L G A O	MKK1 aa
171	K V M E G T V A A Q D E F Y R S G W A L N M K E L K L L Q T	hCSK (JH0559)
241	I G E G E F G A V L O G E Y L G O K V A V K N I K C D V T A	MKK1 aa
201	I G K G E F G D V M L G D Y R G N K V A V K C I K N D A T A	hCSK (JH0559)
271	Q A F L D E T A V M T K M O H E N L V R L L G V I L H O - -	MKK1 aa
231	Q A F L A E A S V M T Q L R H S N L V Q L L G V I V E E K G	hCSK (JH0559)
299	G L Y I V M E H V S K G N L V N F L R T R G R A L V N T A Q	MKK1 aa
261	G L Y I V T E Y M A K G S L V D Y L R S R G R S V L G G D C	hCSK (JH0559)
329	L L O F S L H V A E G M E Y L E S K K L V H R D L A A R N I	MKK1 aa
291	L L K F S L D V C E A M E Y L E G N N F V H R D L A A R N V	hCSK (JH0559)
359	L V S E D L V A K V S D F G L A K A E R K G L D S S R L P V	MKK1 aa
321	L V S E D N V A K V S D F G L T K E A S S T Q D T G K L P V	hCSK (JH0559)
389	K W T A P E A L K H G K F T S K S D V W S F G V L L W E V F	MKK1 aa
351	K W T A P E A L R E K K F S T K S D V W S F G I L L W E I Y	hCSK (JH0559)
419	S Y G R A P Y P K M S L K E V S E A V E K G Y R M E P P E G	MKK1 aa
381	S F G R V P Y P R I P L K D V V P R V E K G Y K M D A P D G	hCSK (JH0559)
449	C P G P V H V L M S S C W E A E P A R R P P F R K L A E K L	MKK1 aa
411	C P P A V Y E V M K N C W H L D A A M R P S F L Q L R E Q L	hCSK (JH0559)
479	A R E L R S A G A P A S V S G Q D A D G S T S P R S O E P	MKK1 aa
441	E H - - - - - I K T H E L H - - - - - L	hCSK (JH0559)

FIGURE 9

1	M D T K S I L E E L L L K R S Q Q K K K M S P N N Y K E R L	MKK2 aa
1	M A A - V I L E S I F L K R S Q Q K K K T S P L N F K K R L	hAtk (X58957)
1	M N N F I L L E E Q L I K K S O O K R R T S P S N F K V R F	hTKT (L10717)
1	M M V - - - - -	mTec (X5663)
31	F V L T K T N L S Y Y E - - Y D K M K R G S R K G S I E I K	MKK2 aa
30	F L L T V H K L S Y Y E Y D F E R G R R G S K K G S I D V E	hAtk (X58957)
31	F V L T K A S L A Y F E D R - - H G K K R T L K G S I E L S	hTKT (L10717)
4	- - - - -	mTec (X5663)
59	K I R C V E K V N L E E Q T P V E R Q - - - - -	MKK2 aa
60	K I T C V E T V V P E K N P P P E R O I P R R G E E S S E M	hAtk (X58957)
59	R I K C V E I V K S D - - - - -	hTKT (L10717)
4	- - - - -	mTec (X5663)
78	- - - - - Y P F Q I V Y K D G L L Y V Y A S N E E	MKK2 aa
90	E Q I S I I E R F P Y P F Q V V Y D E G P L Y V F S P T E E	hAtk (X58957)
70	- I S I P C H Y K Y P F Q V V H D N Y L L Y V F A P D R E	hTKT (L10717)
4	- - - - - S F P V K I N F H H S S P - - - - - Q	mTec (X5663)
98	S R S Q W L K A L Q K E I R G N P H L L V K Y H S G F F V D	MKK2 aa
120	L R K R W I H Q L K N V I R Y N S D L V Q K Y H P C F W I D	hAtk (X58957)
98	S R Q R W V L A L K E E T R N N N S L V P K Y H P N F W M D	hTKT (L10717)
17	S R D R W V K K L K E E I K N N N N I M I K Y H P K F W A D	mTec (X5663)
128	G K F L C C Q Q S C K A A P G C T L W E A Y A N L H T A V N	MKK2 aa
150	G O Y L C C S O T A K N A M G C Q I L E N R N G S L K P G S	hAtk (X58957)
128	G K W R C C S O L E K L A T G C A Q Y D - - - - - P	hTKT (L10717)
47	G S Y Q C C R O T E K L A P G C E K Y N L F E S S I - - -	mTec (X5663)
158	E E K H R V P T F P D R V L K I P R A V P V L K M D A P S S	MKK2 aa
180	S H R K T K K P L P P - - - T P E E D Q I L K K P L P P E	hAtk (X58957)
149	T K N A S K K P L P P - - - T P E D N R - - - - -	hTKT (L10717)
73	- - - R K T L P P - - - A P E - - - I K K R R P P -	mTec (X5663)
188	S T T L A Q Y D N E S K K N Y G S Q P P S S S T S L A Q Y D	MKK2 aa
206	P A A A P V S T S E L K K - - - - - V V A L Y D	hAtk (X58957)
166	- - - R P L W E P E E T V - - - - - V I A L Y D	hTKT (L10717)
89	P P I P P E E E N T E E I - - - - - V V A M Y D	mTec (X5663)
218	S N S K K I Y G S Q P N F N M Q Y I P R E D F P - D W W Q V	MKK2 aa
225	Y M P M N A N D L Q L R K G D E Y F I L E E S N L P W W R A	hAtk (X58957)
182	Y Q T N D P Q E L A L R R N E E Y C L L D S S E I H W W R V	hTKT (L10717)
108	F Q A T E A H D L R L E R G Q E Y I I L E K N D L H W W R A	mTec (X5663)
247	R K L K S S S S S E D V A S S N Q K E R N V N H T T S K I S	MKK2 aa
255	R D - - K N G Q E G Y I P S N Y V T E - A - - - - - hAtk (X58957)	
212	Q D - - R N G H E G Y V P S S Y L V E K S - - - - - hTKT (L10717)	
138	R D - - K - - - - - mTec (X5663)	
277	W E F P E S S S S E E E N L D D Y D W F A G N I S R S Q S	MKK2 aa
273	- - - - - E D S I E M Y E W Y S K H M T R S O A	hAtk (X58957)
231	- - - - - P N N L E T Y E W Y N K S I S R D K A	hTKT (L10717)
141	- - - - - Y G W Y C R N T N R S K A	mTec (X5663)
307	E Q L L R Q K G K E G A F M V R N S S O V G M Y T V S L F S	MKK2 aa
292	E Q L L K Q E G K E G G F I V R D S S K A G K Y T V S V F A	hAtk (X58957)
250	E K L L L D T G K E G A F M V R D S R T A G T Y T V S V F T	hTKT (L10717)
154	E O L L R T E D K E G G F M V R D S S O P G L Y T V S L Y T	mTec (X5663)

FIGURE 10A

337	K - A V N D K K G T V K H Y H V H - - T N A E N K L Y L A E	MKK2 aa hAtk (X58957)
322	K S T - G D P Q G V I R H Y V V - - C S T P Q S Q Y Y L A E	hTKT (L10717)
280	K A V V S E N N P C I K H Y H I K E T N D N P K R Y Y V A E	mTec (X5663)
184	K F G - G E G S S G F R H Y H I K E T A T S P K K Y Y L A E	
364	N Y C F D S I P K L I H Y H Q H N S A G M I T R L R H P V S	MKK2 aa
349	K H L F S T I P E L I N Y H Q H N S A G L I S R L K Y P V S	hAtk (X58957)
310	K Y V F D S I P L L I N Y H O H N G G G L V T R L R Y P V C	hTKT (L10717)
213	K H A F G S I P E I I E Y H K H N A A G L V T R L R Y P V S	mTec (X5663)
394	T K A N K V P D S V S L G N G I W E L K R E E I T L L K E L	MKK2 aa
379	Q Q N K N A P S T A G L G Y G S W E I D P K D L T F L K E L	hAtk (X58957)
340	F G R O K A P V T A G L R Y G K W V I D P S E L T F V Q E I	hTKT (L10717)
243	T K G K N A P T T A G F S Y D K W E I N P S E L T F M R E L	mTec (X5663)
424	G S G Q F G V V Q L G K W K G Q Y D V A V K M I K E G S M S	MKK2 aa
409	G T G Q F G V V K Y G K W R G O Y D V A I K M I K E G S M S	hAtk (X58957)
370	G S G Q F G L V H L G Y W L N K D K V A I K T I R E G A M S	hTKT (L10717)
273	G S G L F G V V R L G K W R A O Y K V A I K A I R E G A M C	mTec (X5663)
454	E D E F F O E A Q T M M K L S H P K L V K F Y G V C S K E Y	MKK2 aa
439	E D E F I E E A K V M M N L S H E K L V Q L Y G V C T K Q R	hAtk (X58957)
400	E E D F I E E A E V M M K L S H P K L V Q L Y G V C L E Q A	hTKT (L10717)
303	E E D F I E E A K V M M K L T H P K L V O L Y G V C T Q Q K	mTec (X5663)
484	P I Y I V T E Y I S N G C L L N Y L R S H G K G L E P S Q L	MKK2 aa
469	P I F I I T E Y M A N G C L L N Y L R E M R H R F Q T Q O L	hAtk (X58957)
430	P I C L V F E F M E H G C L S D Y L R T Q R G L F A A E T L	hTKT (L10717)
333	P I Y I V T E F M E R G C L L N F L R Q R Q G H E S R D M L	mTec (X5663)
514	L E M C Y D V C E G M A F L E S H Q F I I H R D L A A R N C L	MKK2 aa
499	L E M C K D V C E A M E Y L E S K O E L H R D L A A R N C L	hAtk (X58957)
460	L G M C L D V C E G M A Y L E E A C V I I H R D L A A R N C L	hTKT (L10717)
363	L S M C Q D V C E G M E Y L E R N S F I I H R D L A A R N C L	mTec (X5663)
544	V D R D L C V K V S D F G M T R Y V L D D Q Y V S S V G T K	MKK2 aa
529	V N D Q G V V K V S D F G L S R Y V L D D E Y T S S V G S K	hAtk (X58957)
490	V G E N Q V I K V S D F G M T R F V L D D Q Y T S S T G T K	hTKT (L10717)
393	V N E A G V V K V S D F G M A R Y V L D D O X T S S S G A K	mTec (X5663)
574	F P V K W S A P E V F H Y F K Y S S K S D V W A F G I L M W	MKK2 aa
559	F P V R W S P P E V L M Y S K F S S K S D I W A F G V L M W	hAtk (X58957)
520	F P V K W A S P E V F S F S R Y S S K S D V W S F G V L M W	hTKT (L10717)
423	F P V K W C P P E V F N Y S R F S S K S D V W S F G V L M W	mTec (X5663)
604	E V F S L G K Q P Y D L Y D N S Q V V L K V S Q G H R L Y R	MKK2 aa
589	E I Y S L G K M P Y E R F T N S E T A E H I A Q G L R L Y R	hAtk (X58957)
550	E V F S E G K I P Y E N R S N S E V V E D I S T G F R L Y K	hTKT (L10717)
453	E I F T E G R M P F E K N T N Y E V V T M V T R G H R L H R	mTec (X5663)
634	P H L A S D T I Y O I M Y S C W H E L P E K R P T F Q Q L L	MKK2 aa
619	P H L A S E K V Y T I M Y S C W H E K A D E R P T F K I L L	hAtk (X58957)
580	P R L A S T H V Y O I M N H C W K E R P E D R P A F S R L L	hTKT (L10717)
483	P K L A T K Y L Y E V M L R C W Q E R P E G R P S F E D L L	mTec (X5663)
664	S S I T E P L R E K D K H	MKK2 aa
649	S N I L D V M D E E S	hAtk (X58957)
610	R Q L A E I A E S - - - G L	hTKT (L10717)
513	R T I D E L V E C E E T F G R	mTec (X5663)

FIGURE 10B

1	M S N I C Q R L W E - - - - -	MKK3 MPI aa
1	M G C V Q C K D K E A - T - - -	hFyn
1	M G C V H C K E K I S - G - - -	cYrk
1	M G S N K S K P K D A - S Q R - R R S L E P A E N V H G - A	hSrc
1	M G C I K S K E N K S - P A I - K Y R P E N T P E P V S - T	hYes
1	M G C V F C K K L E P - V A T A K E D A G L E G D F R S Y G	hFgr
1	M G C I K S K G K D S L S D D G V D L - K T Q P V R N T E R	hLyn
1	M G S M K S K - - - F L Q V G G N T F S K T E T S A S P H C	hHck
1	M G C G C S S - - - H P E D D W M E N I D V C E N C H Y	hLck
1	M G L L S S K R Q V S E K G K G W S P V K I R T Q D K A P P	mBlk
11	- - - - - - - - - - - - - - - - -	Y L E P MKK3 MPI aa
26	S G Y R Y G T D P T P Q H Y P S F G V T S I P N - - - Y N N F	hFyn
26	P P S Q Y D P D P T - Q L S G A F - - - T H I P D - - - F N N F	cYrk
28	G G G A F P A S Q T P S K P A S A D G H R G P S A A F A P A	hSrc
28	S V S H Y G A E P T T V S P C P S S S A K G T A V N F S S L	hYes
30	A A D H Y G P D P T K A R P A S - S F A H I P N - - - Y S N F	hFgr
30	T I Y V R D P T S N K Q O R P V P E S Q L L P G Q R F Q T K	hLyn
28	P V Y V P D P T S T I K P G P N S H N S N T P G I R - - -	hHck
26	P I V P L D G K G T L L I R N G S E V R D - P L V T Y E G S	hLck
31	P L P P L V V F N H L A P P S P N Q - - - - - - - - - - -	mBlk
15	Y L P C L S T E A D K S T V I E N P G A L C S P Q S Q R H G MKK3 MPI aa	
54	H A A - - - G G Q G L T V F G G V N - - - S S S H T G T L R T	hFyn
51	H A A - - - A V S P P V P P F S G P G F Y P C N T L Q A H S S	cYrk
58	A A E P - - - - - K L F G G F N S S D T V T S P Q R A G	hSrc
58	S M T P F G G S S G V T P F G G A S S S F S V V P S S Y P A	hYes
57	S S Q A I N P G - - - F - - - - - L D S G T I R G	hFgr
60	D P E E - - - - - Q G - - - - - - - - - - -	hLyn
54	E A G S - - - - - E D - - - - - - - - - - -	hHck
55	N P P A - - - - - S P L Q D - - - - - - - - - - -	hLck
49	D P D E - - - - - E E - - - - - - - - - - -	mBlk
45	H - - - - - Y F V A L F D Y Q A R T A E D L S F R A G D K MKK3 MPI aa	
79	R G G T G V T L F V A L Y D Y E A R T E D D L S F H K G E K	hFyn
78	I T G G G V T L F I A L Y D Y E A R T E D D L S F H K G E K	cYrk
81	P L A G G V T T F V A L Y D Y E S R T E T D L S F K K G E R	hSrc
88	G L T G G V T I F V A L Y D Y E A R T T E D L S F K K G E R	hYes
74	V S G I G V T L F I A L Y D Y E A R T E D D L T F T K G E K	hFgr
66	- - - - - D I V V V A L Y P Y D G I H P D D L S F K K G E K	hLyn
60	- - - - - I I V V V A L Y D Y E A I H H E D L S F Q K G D Q	hHck
64	- - - - - N L V I A L H S Y E P S H D G D L G F E K G E Q	hLck
55	- - - - - R F V V V A L F D Y A A V N D R D L Q V L K G E K	mBlk
69	L Q V L D T L H E G W W F A R H L E K R R D G S S Q Q L Q G MKK3 MPI aa	
109	F Q I L N S S E G D W W E A R S L T T G E T G - - - - -	hFyn
108	F H I I N N T E G D W W E A R S L S S G A T G - - - - -	cYrk
111	L Q I V N N T E G D W W L A H S L S T G Q T G - - - - -	hSrc
118	F Q I I N N T E G D W W E A R S I A T G K N G - - - - -	hYes
104	F H I I L N N T E G D W W E A R S L S S G K T G - - - - -	hFgr
90	M K V L E E H - G E W W K A K S L L T K K E G - - - - -	hLyn
84	M V V L E E S - G E W W K A R S L A T R K E G - - - - -	hHck
88	L R I L E Q S - G E W W K A Q S L T T G Q E G - - - - -	hLck
79	L O V L R S T - G D W W L A R S L V T G R E G - - - - -	mBlk

FIGURE 11A

99	Y I P S N Y V A E D R S L Q A E P W F F G A I G R S D A E K	MKK3 MPI aa
132	Y I P S N Y V A P V D S I Q A E E W Y F F G K L G R K D A E R	hFyn
131	Y I P S N Y V A P V D S I Q A E E W Y F F G K I T R E S E R	cYrk
134	Y I P S N Y V A P S D S I Q A E E W Y F F G K M G R K D A E R	hSrc
141	Y I P S N Y V A P A D S I Q A E E W Y F F G K I G R K D A E R	hYes
127	C I P S N Y V A P V D S I Q A E E W Y F F G K I G R K D A E R	hFgr
112	F I P S N Y V A K L N T L E T E E W F F K D I T R K D A E R	hLyn
106	X I P S N Y V A R V D S L E T E E W F F K G I S R K D A E R	hHck
110	F I P F N F V A K A N S L E P E P W F F K N L S R K D A E R	hLck
101	X V P S N F V A P V E T L E V E K W F F R T I S R K D A E R	mBlk
129	Q L L Y S E N K T G S F L I R E S E S Q K G E F S L S V L D	MKK3 MPI aa
162	Q L L S F G N P R G T F L I R E S E T T K G A Y S L S I R D	hFyn
161	Q L L C H G N C R G T F L I R E S E T T K G A Y S L S I R D	cYrk
164	L L L N A E N P R G T F L V R E S E T T K G A Y C L S V S D	hSrc
171	L L L N P G N Q R G I F L V R E S E T T K G A Y S L S I R D	hYes
157	Q L L S P G N P Q G A F L I R E S E T T K G A Y S L S I R D	hFgr
142	Q L L A P G N S A G A F L I R E S E T L K G S F S L S V R D	hLyn
136	Q L L A P G N M L G S F M I R D S E T T K G S Y S L S V R D	hHck
140	Q L L A P G N T H G S F L I R E S E S T A G S F S L S V R D	hLck
131	Q L L A P M N K A G S F L I R E S E S N K G A F S L S V K D	mBlk
159	- - - - G A V V K H Y R I K R L D E G G F F L T R R R I F	MKK3 MPI aa
192	W D D M K G D H V K H Y K I R K L D N G G Y Y I T T R A Q F	hFyn
191	W D E A K G D H V K H Y K I R K L D S G G Y Y I T T R A Q F	cYrk
194	F D N A K G L N V K H Y K I R K L D S G G F Y I T S R T Q F	hSrc
201	W D E I R G D N V K H Y K I R K L D N G G Y Y I T T R A Q F	hYes
187	W D Q T R G D H V K H Y K I R K L D M G G Y Y I T T R V Q F	hFgr
172	F D P V H G D V I K H Y K I R S L D N G G Y Y I S P R I T F	hLyn
166	Y D P R Q G D T V K H Y K I R T L D N G G F Y I S P R S T F	hHck
170	F D Q N Q G E E V V K H Y K I R N L D N G G F Y I S P R I T F	hLck
161	I T T - Q G E E V V K H Y K I R S L D N G G Y Y I S P R I T F	mBlk
184	S T L N E F V S H Y T K T S D G L C V K L G K P C L K I Q V	MKK3 MPI aa
222	E T L Q Q L V Q H Y S E R A A G L C C C R L V V P C H K G M -	hFyn
221	D T I Q Q L V Q H Y I E R A A G L C C C R L A V P C P K G T -	cYrk
224	N S L Q Q L V A Y Y S K H A D G L C H R L T T V C P T S K -	hSrc
231	D T L Q K L V K H Y T E H A D G L C H K L T T V C P T V K -	hYes
217	N S V O E L V O H Y M E V N D G L C N L L I A P C T I M K -	hFgr
202	P C I S D M I K H Y Q K Q A D G L C R R L E K A C I S P K -	hLyn
196	S T L O E L V D H Y K K G N D G L C Q K L S V P C M S S K -	hHck
200	P G L H E L V R H Y T N A S D G L C T R L S R P C Q T Q K -	hLck
190	P T L O A L V O H Y S K G D G L C O K L T L P C V N L A -	mBlk
214	P A P F D L S Y K T V D Q W E I D R N S I Q O L L K R L G S G	MKK3 MPI aa
251	P R L T D L S V K T K D V W E I P R E S L Q L I K R L G N G	hFyn
250	P K L A D L S V K T K D V W E I P R E S L Q L L Q K L G N G	cYrk
253	P Q T Q G L A - - - K D A W E I P R E S L R L E V K L G Q G	hSrc
260	P Q T Q G L A - - - K D A W E I P R E S L R L E V K L G Q G	hYes
246	P Q T L G L A - - - K D A W E I S R S S I T L E R R L G T G	hFgr
231	P Q - - - K P W D K D A W E I P R E S I K L V K R L G A G	hLyn
225	P Q - - - K P W E K D A W E I P R E S L K L E K K L G A G	hHck
229	P Q - - - K P W W E D E W E V P R E T L K L V E R L G A G	hLck
219	P K - - - N L W A Q D E W E I P R Q S L K L V R K L G S G	mBlk

FIGURE 11B

244	Q F G E V W E G L W N N T T P V A V K T L K P G S M D P N D	MKK3 MPI aa
281	Q F G E V W M G T W N G N T K V A I K T L K P G T M S P E S	hFyn
280	Q F G E V W M G T W N G T T K V A V K T L K P G T M S P E A	cYrk
280	C F G E V W M G T W N G T T R V A I K T L K P G T M S P E A	hSrc
287	C F G E V W M G T W N G T T K V A I K T L K P G T M M P E A	hYes
273	C F G D V W L G T W N G S T K V A V K T L K P G T M S P K A	hFgr
257	Q F G E V W M G Y Y N N S T K V A V K T L K P G T M S V Q A	hLyn
251	Q F G E V W M A T Y N K H T K V A V K T M K P G S M S V E A	hHck
255	Q F G E V W M G Y Y N G H T K V A V K S L K Q G S M S P D A	hLck
245	Q F G E V W M G Y Y K N N M K V A I K T L K E G T M S P E A	mBlk
274	F L R E A Q I M K N L R H P K L I Q L Y A V C T L E D P I Y	MKK3 MPI aa
311	F L E E A Q I M K K L K H D K L V Q L Y A V V S - E E P I Y	hFyn
310	F L E E A Q I M K R L R H D K L V Q L Y A V V S - E E P I Y	cYrk
310	F L Q E A Q I V M K K L R H E K L V O L Y A V V S - E E P I Y	hSrc
317	F L Q E A Q I M K K L R H D K L V P L Y A V V S - E E P I Y	hYes
303	F L E E A Q V M K K L L R H D K L V O L Y A V V S - E E P I Y	hFgr
287	F L E E A N L M K T L Q H D K L V R L Y A V V T R E E P I Y	hLyn
281	F L A E A N V M K T L Q H D K L V K L H A V V T K E - P I Y	hHck
285	F L A E A N L M K Q L Q H Q R L V R L Y A V V T - Q E P I Y	hLck
275	F L G E A N V M K T L Q H E R L V R L Y A V V T R E - P I Y	mBlk
304	I I T E L M R H G S L Q E Y L Q N D T G S K I H L T O Q V D	MKK3 MPI aa
340	I V T E Y M N K G S L L D F L K D G E G R A L K L P N L V D	hFyn
339	I V T E F M S Q G S L L D F L K D G D G R Y L K L P Q L V D	cYrk
339	I V T E Y M S K G S L L D F L K G E T G K Y L R L P Q L V D	hSrc
346	I V T E F M S K G S L L D F L K E G D G K Y L K L P Q L V D	hYes
332	I V T E F M C H G S L L D F L K N P E G Q D L R L P Q L V D	hFgr
317	I I T E Y M A K G S L L D F L K S D E G G K V L L P K L I D	hLyn
310	I I T E F M A K G S L L D F L K S D E G S K O P L P K L I D	hHck
314	I I T E Y M E N G S L V D F L K T P S G I K L T I N K L L D	hLck
304	I V T E Y M A R G C L L D F L K T D E G S R L S L P R L I D	mBlk
334	M A A Q V A S G M A Y L E S R N Y I H R D L A A R N V L V G	MKK3 MPI aa
370	M A A Q V A A G M A Y I E R M N Y I H R D L R S A N I L V G	hFyn
369	M A A Q I A A G M A Y I E R M N Y I H R D L R A A N I L V G	cYrk
369	M A A Q I A S G M A Y V E R M N Y V H R D L R A A N I L V G	hSrc
376	M A A Q I A D G M A Y I E R M N Y I H R D L R A A N I L V G	hYes
362	M A A Q V A E G M A Y M E R M N Y I H R D L R A A N V L V S	hFgr
347	F S A Q I A E G M A Y I E R K N Y I H R D L R A A N V L V S	hLyn
340	F S A Q I A E G M A F I E Q R N Y I H R D L R A A N I L V S	hHck
344	M A A Q I A E G M A F I E E R N Y I H R D L R A A N I L V S	hLck
334	M S A Q V A E G M A Y I E R M N S I H R D L R A A N I L V S	mBlk
364	E H N I Y K V A D F G L A R V F K V D N E D I Y E S R H E I	MKK3 MPI aa
400	N G L I C K I A D F G L A R L I - - - E D N E Y T A R Q G A	hFyn
399	D N L V C K I A D F G L A R L I - - - E D N E Y T A R Q G A	cYrk
399	E N L V C K V A D F G L A R L I - - - E D N E Y T A R Q G A	hSrc
406	E N L V C K I A D F G L A R L I - - - E D N E Y T A R Q G A	hYes
392	E R L A C K I A D F G L A R L I - - - K D D E Y N P C O G S	hFgr
377	E S L M C K I A D F G L A R V I - - - E D N E Y T A R E G A	hLyn
370	A S L V C K I A D F G L A R V I - - - E D N E Y T A R E G A	hHck
374	D T L S C K I A D F G L A R L I - - - E D N E Y T A R E G A	hLck
364	E T L C C K I A D F G L A R I I - - - D S E Y T A Q E G A	mBlk

FIGURE 11C

394	K L P V K W T A P E A I R S N K F S I K S D V W S F G I L L	MKK3 MPI aa
427	K F P I K W T A P E A A L Y G R F T I K S D V W S F G I L L	hFyn
426	K F P I K W T A P E A A L F G [K] F T I K S D V W S F G I L L	cYrk
426	K F P I K W T A P E A A L Y G R F T I K S D V W S F G I L L	hSrc
433	K F P I K W T A P E A A L Y G R F T I K S D V W S F G I L L Q	hYes
419	K F P I K W T A P E A A L F G R F T I K S D V W S F G I L L	hFgr
404	K F P I K W T A P E A I N F G C F T I K S D V W S F G I L L	hLyn
397	K F P I K W T A P E A I N E G S F T I K S D V W S F G I L L	hHck
401	K F P I K W T A P E A I N Y G T F T I K S D V W S F G I L L	hLck
390	K F P I K W T A P E A I H F G V F T I K A D V W S F G V L L	mBlk
424	Y E I I T Y G K M P Y S G M T G A Q V I Q M L A Q N Y R L P	MKK3 MPI aa
457	T E L V T K G R V P Y P G M N N R E V L E Q V E R G Y R M P	hFyn
456	T E L V T K G R V P Y P G M N N R E V L E Q V E R G Y R M Q	cYrk
456	T E L T T K G R V P Y P G M V N R E V L D Q V E R G Y R M P	hSrc
463	T E L V T K G R V P Y P G M V N R E V L E Q V E R G Y R M P	hYes
449	T E L I T K G R I P Y P G M N K R E V L E Q V E Q G Y H M P	hFgr
434	Y E I V T Y G K I P Y P G R T N A D V M T A L S Q G Y R M P	hLyn
427	M E I V T Y G R I P Y P G M S N P E V I R A L E R G Y R M P	hHck
431	T E I V T H G R I P Y P G M T N P E V I Q N L E R G Y R M V	hLck
420	M V I V T Y G R V P Y P G M S N P E V I R S L E H G Y R M P	mBlk
454	Q P S N C P Q Q F Y N - I M L E C W N A E P K E R P T F E T	MKK3 MPI aa
487	C P Q D C P I S L H - E L M I H C W K K D P E E R P T F E Y	hFyn
486	C P G G C P P S L H - D V M V Q C W K R E P E E R P T F E Y	cYrk
486	C P P E C P E S L H - D L M C O C W R K E P E E R P T F E Y	hSrc
493	C P Q G C P E S L H - E L M N L C W K K D P D E R P T F E Y	hYes
479	C P P G C P A S L Y - E A M E Q T W R L D P E E R P T F E Y	hFgr
464	R V E N C P D E L Y - D I M K M C W K E K A E E R P T F D Y	hLyn
457	R P E N C P E E L Y - N I M M R C W K N R P E E R P T F E Y	hHck
461	R P D N C P E E L Y - Q L M R L C W K E R P E D R P T F D Y	hLck
450	C P E T C P P E L Y N D I I T E C W R G R P E E R P T F E F	mBlk
483	L R W K L E D Y F E - T D S S Y S D A N N F I R	MKK3 MPI aa
516	L Q S F L E D Y F T A T E P Q Y Q P G E N - - - L	hFyn
515	L Q S F L E D Y F T A T E P Q Y Q P G D N - - - Q	cYrk
515	L Q A F L E D Y F T S T E P Q Y Q P G E N - - - L	hSrc
522	I Q S F L E D Y F T A T E P Q Y Q P G E N - - - L	hYes
508	L Q S F L E D Y F T S A E P Q Y Q P G D Q - - - T	hFgr
493	L Q S V L D D F Y T A T E G Q Y Q O - - Q - - P	hLyn
486	I Q S V L D D F Y T A T E S Q Y Q O - - Q - - P	hHck
490	L R S V L E D F F T A T E G Q Y O P - - Q - - P	hLck
480	L Q S V L E D F Y T A T E G O Y E L - - Q - - P	mBlk

FIGURE 11D

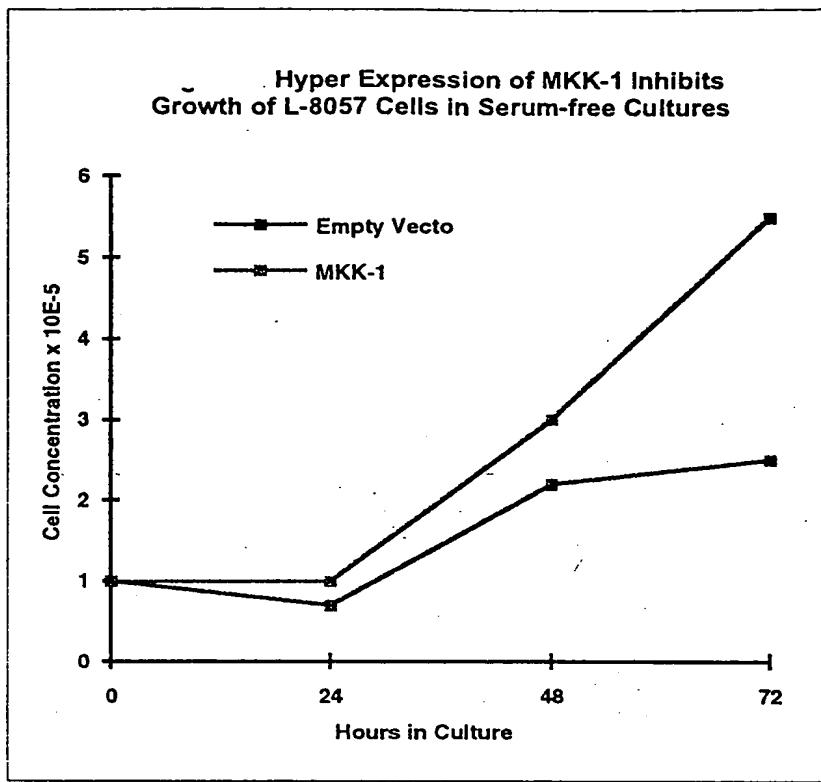


FIGURE 12

Growth Factor Response of MKK-1 Expressing L-8057 Cells

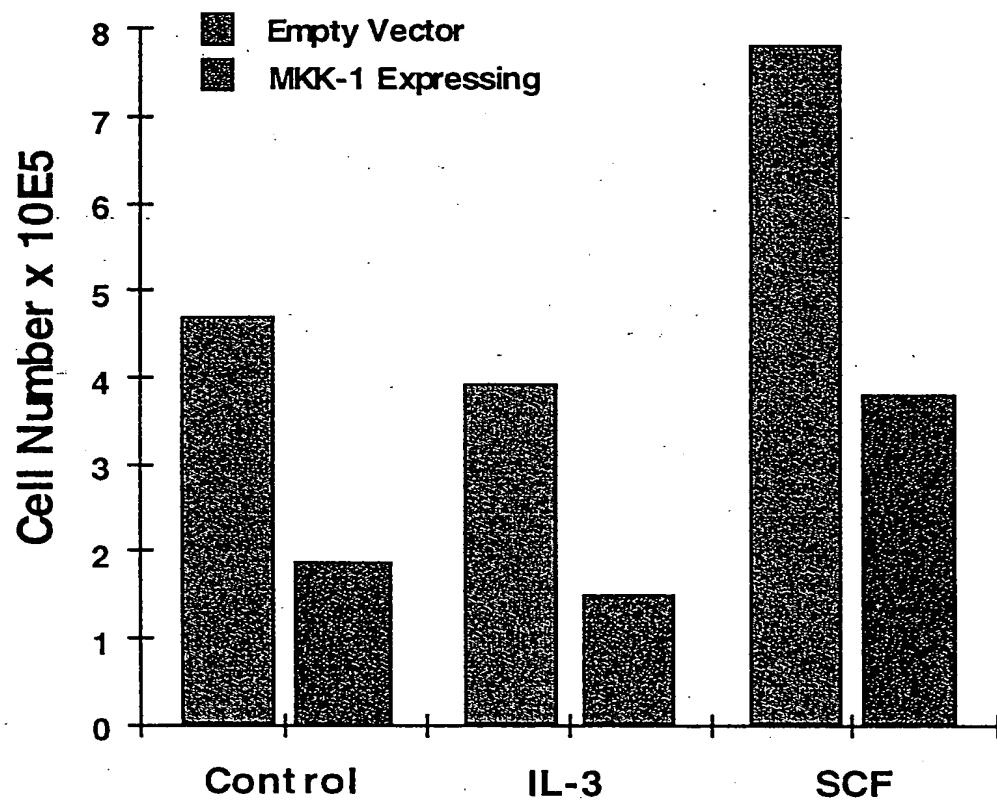
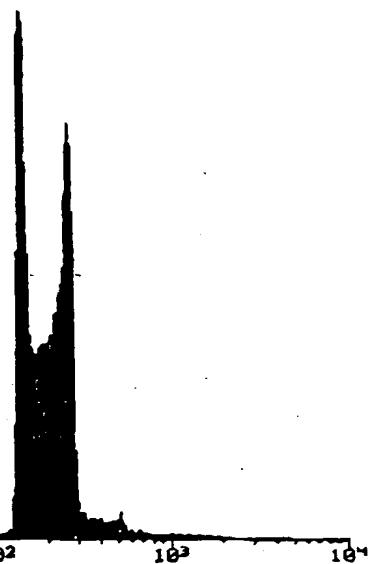


FIGURE 13

FACS37:FACS37881\FL2-H\FL2-Height

CONTROL

Flow Cytometry Data
Cell Type: [REDACTED]
Sample ID: [REDACTED]
Date: [REDACTED]
Time: [REDACTED]
User: [REDACTED]



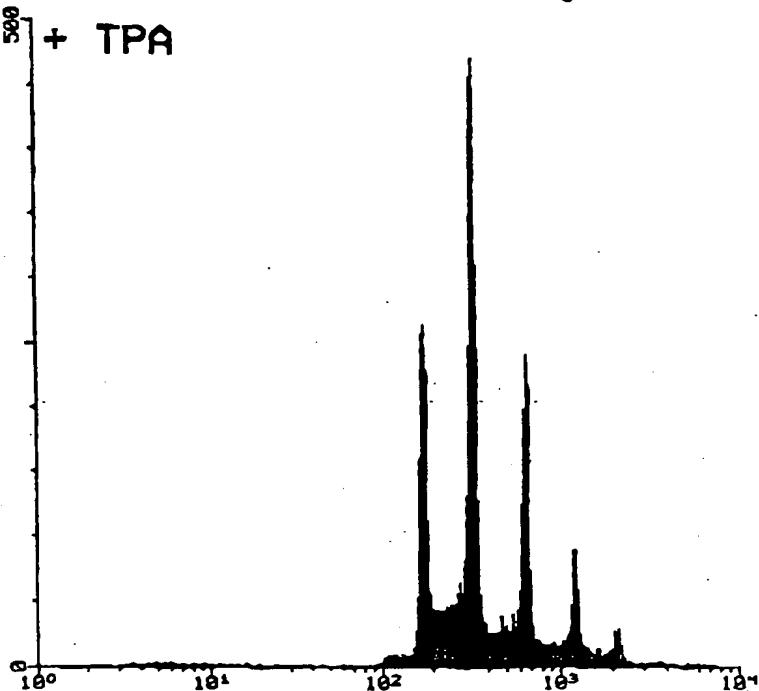
FACS37:FACS37883\FL2-H\FL2-Height

MKK-1



FACS37:FACS37882\FL2-H\FL2-Height

+ TPA



FACS37:FACS37884\FL2-H\FL2-Height

MKK-1 + TPA

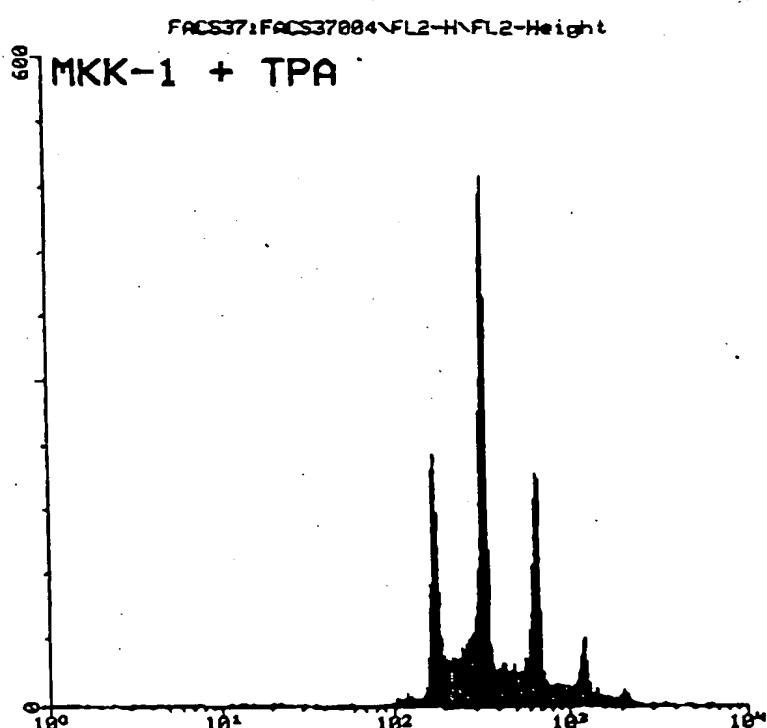


FIGURE 14